

SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA

<120> A fucose transporter

<130> PH-2205-PCT

<140>

<141>

<150> JP 2003/174006

<151> 2003-06-18

<150> JP 2003/174010

<151> 2003-06-18

<150> JP 2003/282081

<151> 2003-07-29

<150> JP 2003/282102

<151> 2003-07-29

<160> 10

<170> PatentIn Ver. 2.1

<210> 1

<211> 8160

<212> DNA

<213> *Cricetulus griseus*

<400> 1

cccggggtaa ccgccccacc acgcctggag cccgacgtgg cgagcgatgg ggacagcgag 60
caggaagtcg tactggggag ggccgcgtag cagatgcagc cgagggcggc gctgccaggt 120
acacccgagg gcaccgcggg ggtgagcgcc aggtccctga accagccagg cctccagagc 180
cgagtccggc ggaccgacgg tacgttcttg aatgggaagg gatccgggac accgaattgc 240
tgcattgagg ggctcagagg ttctgatgtg ggagtccaga aagggtttta tctaccggag 300
gtgatgtgac ttccggcctc tggaagtgtc gttggagtct ctgggacctt gggtcctctc 360
gactaggttt ggaaggggtg aaataggggt agggagaaag gagaggactg cagcaatgtc 420
ttcccgaacg acctgggttc gggaggggtc gaaggacaag gggctgttgt ggggggtctt 480
cagacgcgga ggggtggtat tctattttct gggaagatgg tgtcgatgca cttgaccaag 540
tctagtcgat ctgaagaggc taggggaaca gacagtgaga gaggatgggtg gagggagtgg 600
cagaacctt ccagaaactg ggagaggctc tagcacctgc aacctcttc ctggcctccg 660
gggagtccca gaagagggca ggacatgga cacaggtgca ttcgtgccgg cgcgctccgg 720
cctggcgaag gtgcgcgctc ttggaggccg cgggagggcc agacgcgcgc ccggagagct 780
ggccctttaa ggctaccgg aggcgtgtca ggaaatgcgc cctgagcccg cccctcccg 840
aacgcggccc gagacctggc aagctgagac ggaactcgga actagcactc ggctcgcggc 900
ctcggtagagg ccttgcgccc gccatgcctc tgtcattgcc cctcgggccg cctccctgaa 960
cctccgtgac cgccctgcag tcctccctcc ccccttcga ctcggcgggc gcttccgggc 1020
gtccccgcag cccgccctcc acgtagccca cacctccctc tcggcgctcc gcttcccacg 1080
cgggtccccga cctgttcttt cctcctccac cctgcccttc tgctcctctc ccttccttc 1140
tcccctcgac tcgtccctat taggcaacag cccctgtggt ccagccggcc atggctgtca 1200
aggctcacac ccttagctag gccccttctc ccttccctgg gtcttgtctc atgacccct 1260
gccccgcccg ggagcgagcg cgatgtggag cagtgcctct ggcaagcaga acttcacca 1320
agccatgtga caattgaagg ctgtaccccc agaccctaac atcttgagc cctgtagacc 1380
agggagtgtc tctggccgtg gggtagccta gctcttctac caccatgaac agggccctc 1440
tgaagcgtc caggatcctg cgcattggcg tgactggagg ctccactgcc tctgaggagg 1500
cagatgaaga cagcaggaac aagccgttct tgctgcgggc gctgcagatc gcgctggtcg 1560
tctctctcta ctgggtcacc tccatctcca tggatttct caacaagtac ctgctggaca 1620

gccctccct gcagctggat acccctatct tcgtcacttt ctaccaatgc ctggtgacct 1680
 ctctgctgtg caagggcctc agcactctgg ccacctgtg ccctggcacc gttgacttcc 1740
 ccacctgaa cctggacctt aagggtggccc gcagcgtgct gccactgtcg gtagtcttca 1800
 ttggcatgat aagtttcaat aacctctgcc tcaagtacgt aggggtggcc ttctacaacg 1860
 tggggcgctc gctcaccacc gtgttcaatg tgcttctgtc ctacctgtg ctcaaacaga 1920
 ccacttcctt ctatgccctg ctcatatgtg gcatcatcat tgggtgagtgg ggcccggggg 1980
 ctgtgggagc aggatgggca tcgaactgaa gccctaaagg tcaaacactgt aggtaccttt 2040
 acttactgtc ccaggtccct tgcatcagca gttacaggaa gagccctgta gaaaacaaat 2100
 aacttcctta tggtcattca acaagttagg gaccagcca gggtgaaaat aatgttagca 2160
 gcaactacag caaagatggc tctcgccact tgcatgatta aaatgtgcca ggtactcaga 2220
 tctaagcatt ggatccacat taactcaact aatccctatt acaaggtaaa atatatccga 2280
 attttacaga gggaaaacca aggcacagag aggctaagta gcttgaccag gatcacacag 2340
 ctaataatca ctgacatagc tgggatttaa acataagcag ttacctccat agatcacact 2400
 atgaccacca tgccactgtt ccttctcaag agttccagga tcctgtctgt ccagttctct 2460
 ttaaagagga caacacatct gacattgcta ccttgaggta acatttgaaa tagtgggtag 2520
 acatatgttt taagttttat tcttactttt tatgtgtgtg tgtttggggg gccaccacag 2580
 tgtatgggtg gagataaggg gacaacttaa gaattgggtcc tttctccac cacatgggtg 2640
 ctgaggtctg aactcaggtc atcaggattg gcacaaatcc ctttaccac tgagccattt 2700
 cactggtcca atatatgtgt gcttttaaga ggctttaact attttccag atgtgaatgt 2760
 cctgctgac attatccct tttaccgga agccctctgg gaggtgccat ccctgtggtc 2820
 gtctgcatac aaatggggaa actgcaactc agagaaacaa ggctacttgc cagggcccca 2880
 caagtaagat aggctgggat gccatcccag actggccaca ctccctggcc tgtgcttcaa 2940
 gccagtttac tttgttcctg cccattggaa gttagcatgt tgcagtcaaa cacaataact 3000
 acaggccaaa agtgctttta aattaaagtc agatgaactt ttaaacaatcc agagtcctc 3060
 aactgcagga gttacaacct gattctgcaa ccacttttgc agtgcccgt agtcatatgt 3120
 agctagaggc tcttggctag gacagcatgt gttaggaaac atctggccct gagatcattg 3180
 aattgagtga ctgctgggtg acaaagacca aggcattcgt tccctgagag tcctgggcaa 3240
 gcagcaatgt gaccttcatt tgtacctact caggttcttt atctgtcctg tttgacctac 3300
 ttagtctcct ctggtgtctc agaggcccag gctgggtact ctggatgtca ggatcaggcc 3360
 aatgcgcaca tctgccctag aaatgtcccc ctggttgagc agctcctgaa tccatcggtg 3420

aagggtctgg accagggagg agtcagataa aaagctgaca gcactggggg actccatggg 3480
gaactccac ctgccccac acatccatcc taagagaact ggtattcctt gtttcctctt 3540
tgtcctacaa ggcaccctgg gatccactt cagtctccca gccttgccag ggtagaggg 3600
catgagcctc cttgtgggga atttagatgc aagaaggtag agtcactaga gaacctgagc 3660
tcagatcccc aaagtaacca gtacctgata gtgaggcagc tgagaaccgc agcagcctgc 3720
ctgagtggct gaactctgcg gcctccgaa ctggcccaa ctgttgggtc tctcttct 3780
tctcctgtg agggagggcc catctctgat aagtgtgtg gggactctag agtagggagg 3840
aggaggagca atctaagcag gccttactga gaagtccttg ctggcatgtg gctgcctgag 3900
gagtacagac tgggaacacc catttgaatg agtaaggttt ttcctgaagg ccatggggag 3960
ccacggagga aaatcatttt agttacaaga caaagagtag attggttaac atgggagcaa 4020
ggacatggcc ccaattttca tagatgaagg aaattggaac tcagagaggt taagtaactt 4080
ctcccaaata gctcagcttc aaaatcacag aacagtcaga gtctagatct ctctgatgcc 4140
tgtgatggtc ctgccattcc atgttgctga tccctgtggc atcagtaagc ctctaccttg 4200
tgggaatgca ggatctaaat gaagagagga agtgctggcc ccatgctgtg gtctggaaag 4260
ctatgcaggc tctttgagca gagagtgacc cacaagtga tagagtccta tgagactcaa 4320
agcaacatcc acccttaagc agctctaacc aaatgctcac actgagggag ccaaagccaa 4380
gttagagtcc tgtgcttgcc caaggctact ttgcctggcc ctctctctat agcaccctg 4440
ttatcttata gccctcatta cagtgattac aattataatt agagaggtaa cagggccaca 4500
ctgtccttac acattcccct gctagattgt agctgggaga gggggagatg taggtggctg 4560
ggggagtggg agggaagatg cagattttca ttctgggctc tactccctca gccatttttt 4620
ggtgtgggag ttagactttg gatatgttga tgatgaggta agggccacag aacagtctga 4680
actgtggtat cagaatctg tccctctccc tctctctca tccctcttca ccttgctact 4740
cctctgtctg ctacaggtgg tttctggctg ggtatagacc aagagggagc tgagggcacc 4800
ctgtccctca taggcacat cttcggggtg ctggccagcc tctgcgtctc cctcaatgcc 4860
atctatacca agaaggtgct ccagcagtg gacaacagca tgtggcgctt aaccttctat 4920
aacaatgtca atgcctgtgt gctcttcttg cccctgatgg ttctgctggg tgagctccgt 4980
gccctccttg actttgctca tctgtacagt gccacttct ggctcatgat gacgtgggt 5040
ggcctcttcg gctttgcat tggctatgtg acaggactgc agatcaaatt caccagtccc 5100
ctgaccaca atgtatcagg cacagccaag gcctgtgcgc agacagtgtt ggccgtgctc 5160
tactatgaag agactaagag cttcctgtgg tggacaagca acctgatggt gctgggtggc 5220

tcctcagcct atacctgggt caggggctgg gagatgcaga agaccaaga ggaccccagc 5280
 tccaaagagg gtgagaagag tgctattggg gtgtgagctt cttcaggagc ctgggactga 5340
 acccaagtgg ggcctacaca gactgaagg cttcccatgg agctagccag tgtggccctg 5400
 agcaatactg tttacatcct ccttgaata tgatctaaga ggagccaggg tctttcctgg 5460
 taatgtcaga aagctgcca atctcctgtc tgccccatct tgttttggga aaaccctacc 5520
 aggaatggca cccctacctg cctcctccta gagcctgtct acctccatat catctctggg 5580
 gttgggacca gctgcagcct taaggggctg gattgatgaa gtgatgtctt ctacacaagg 5640
 gagatgggtt gtgatccac taattgaagg gatttgggtg accccacacc tctgggatcc 5700
 agggcaggta gagtagtagc ttaggtgcta ttaacatcag gaacacctca gcctgccttt 5760
 gaagggaagt gggagcttgg ccaagggagg aaatggccat tctgccctct tcagtgtgga 5820
 tgagtatggc agacctgttc atggcagctg caccctgggg tggctgataa gaaaacattc 5880
 acctctgcat ttcataattg cagctctaga acgggggaga gccacacatc ttttacgggt 5940
 taagtagggt gatgagctcc tccgcagtc ctaaccccag ctttacctgc ctggcttccc 6000
 ttggcccagc tacctagctg tactcccttt ctgtactctt ctcttctccg tcatggcctc 6060
 ccccaacacc tccatctgca ggcaggaagt ggagtccact tgtaacctct gttcccatga 6120
 cagagccctt tgaatactg aaccctcat gacagtaaga gacatttatg ttctctgggg 6180
 ctggggctga aggagcccac tggttctcac ttagcctatc tggctcctgt cacaaaaaa 6240
 aaaaaagaaa aaaaaaagc ataaaccaag ttactaagaa cagaagttgg tttataacgt 6300
 tctggggcag caaagcccag atgaagggac ccategacc tctctgtcca tatectcatg 6360
 ctgcagaagt acaggcaagc tcctttaagc ctcatatagg aacactagcc tactcatga 6420
 gggttttact ccatgacctg tcaacctcaa agccttcaac atgaggactc caacgtaa 6480
 ttggggacag aagcactcag accatacccc agcaccacac cctcctaacc tcagggtagc 6540
 tgtcattctc ctagtctcct ctcttgggcc tttagaacct ccatttcctt ggggtaatgt 6600
 ctgatgtttt tgtccctgtc ataaaaagat ggagagactg tgtccagcct ttgattccta 6660
 cttcctacaa tcccaggttc taatgaagtt tgtggggcct gatgccctga gttgtatgtg 6720
 atttaataat aaaaaagcaa gatacagcat gtgtgtggac tgagtgaggg ccacagggat 6780
 ctaaaagcca agtgtgaggg gaccagcta cagcaggcag catcctgagc ctggaatctc 6840
 ttcaggacaa gaattctcca tatacctacc tactctgggg agtaggtggc cagagttcaa 6900
 gcttcctta gtaccaacta cactggctg tgctcttact gaaggcagac atggcactga 6960
 gtgtgtcca tctgtcactc atctccacag ccattcctaa tgtgtggggg gggagccatc 7020

accaaacccc attttcagat aaggacacag gctcagagag gcttgtgtgg agaaaagtag 7080
 cagcagaatt cagagagctg ggtctcctgc agcaccttgg actgccagca gccacagtgc 7140
 ttgtcacaca gcacatactc aaaagaatgc cagccccctc agcctagagt gcctggcctt 7200
 tctttcagat gaggaagagg gtcaaagctg ttagcttgcc caccatatga ccacatacat 7260
 gaccaacagc ttgagggagg gaggattact gtggctccca gcctgagagg tgggacaccc 7320
 aaatgtatta ggtccttgaa tcagggctga ccttgtgatt cagtcactcc taccagaatg 7380
 ctggggaatg gggatgccaa aggcaaagga ggctttctaa ggtgtggtgt aagataggca 7440
 tttctgcttc catgtacacc tgtgagcaga gtaggaaggc cctgtggaga atatatccca 7500
 caaaccagta gcctttcctg gcagtgggtg aatactgccca ccctataccc ctatgcaagg 7560
 ccagtagaac cacccaaccc acaacatcta gagaaattac aggtcatctt aagcctctaa 7620
 attgtggaga aactcgacat gcgcacgatt cctaacctgc tagcctaggg tgcggggtgg 7680
 ataatttaag gaaactgggg tttcttatag aatcggaggc tccatgaagt caccctgaca 7740
 agaggtcagc aatagccagc agcagtggct actcctaagc ctccagacag agcacctgt 7800
 gaatgtacct tattctcaca tctgggtgtc tatagggtgt actgggtcag atgtcaccca 7860
 ggccattgca atgggccctt agcccatgg ggtgttgga tagcagccaa gcagctccca 7920
 tgctgagata ctgcctgcag tagactgatg gataagaaaa caaggcccaa aatgttttct 7980
 ttccagactt gatctttctt tgtcaaaaa tgctgttttc ccttaaactt gcccaaaccc 8040
 attgttttgc agttgaggaa aataaggcat agaaagatta aaggaagttt ctgaggttac 8100
 agagcaaagt actggcttca cctgaaatag acagggtgtc cctgatcctg atttgagctc 8160

<210> 2

<211> 352

<212> PRT

<213> *Cricetulus griseus*

<400> 2

Met Ala Leu Thr Gly Gly Ser Thr Ala Ser Glu Glu Ala Asp Glu Asp

1

5

10

15

Ser Arg Asn Lys Pro Phe Leu Leu Arg Ala Leu Gln Ile Ala Leu Val
20 25 30

Val Ser Leu Tyr Trp Val Thr Ser Ile Ser Met Val Phe Leu Asn Lys
35 40 45

Tyr Leu Leu Asp Ser Pro Ser Leu Gln Leu Asp Thr Pro Ile Phe Val
50 55 60

Thr Phe Tyr Gln Cys Leu Val Thr Ser Leu Leu Cys Lys Gly Leu Ser
65 70 75 80

Thr Leu Ala Thr Cys Cys Pro Gly Thr Val Asp Phe Pro Thr Leu Asn
85 90 95

Leu Asp Leu Lys Val Ala Arg Ser Val Leu Pro Leu Ser Val Val Phe
100 105 110

Ile Gly Met Ile Ser Phe Asn Asn Leu Cys Leu Lys Tyr Val Gly Val
115 120 125

Ala Phe Tyr Asn Val Gly Arg Ser Leu Thr Thr Val Phe Asn Val Leu
130 135 140

Leu Ser Tyr Leu Leu Leu Lys Gln Thr Thr Ser Phe Tyr Ala Leu Leu
145 150 155 160

Thr Cys Gly Ile Ile Ile Gly Gly Phe Trp Leu Gly Ile Asp Gln Glu
165 170 175

Gly Ala Glu Gly Thr Leu Ser Leu Ile Gly Thr Ile Phe Gly Val Leu
180 185 190

Ala Ser Leu Cys Val Ser Leu Asn Ala Ile Tyr Thr Lys Lys Val Leu
195 200 205

Pro Ala Val Asp Asn Ser Ile Trp Arg Leu Thr Phe Tyr Asn Asn Val
210 215 220

Asn Ala Cys Val Leu Phe Leu Pro Leu Met Val Leu Leu Gly Glu Leu
225 230 235 240

Arg Ala Leu Leu Asp Phe Ala His Leu Tyr Ser Ala His Phe Trp Leu
245 250 255

Met Met Thr Leu Gly Gly Leu Phe Gly Phe Ala Ile Gly Tyr Val Thr
260 265 270

Gly Leu Gln Ile Lys Phe Thr Ser Pro Leu Thr His Asn Val Ser Gly
275 280 285

Thr Ala Lys Ala Cys Ala Gln Thr Val Leu Ala Val Leu Tyr Tyr Glu
290 295 300

Glu Thr Lys Ser Phe Leu Trp Trp Thr Ser Asn Leu Met Val Leu Gly
305 310 315 320

Gly Ser Ser Ala Tyr Thr Trp Val Arg Gly Trp Glu Met Gln Lys Thr
325 330 335

Gln Glu Asp Pro Ser Ser Lys Glu Gly Glu Lys Ser Ala Ile Gly Val

340

345

350

<210> 3

<211> 22

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic RNA

<400> 3

uaaccucugc cucaaguaca gc

22

<210> 4

<211> 19

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic RNA

<400> 4

guacuugagg cagagguua

19

<210> 5

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 5

atgcatgccca ccatgaaaaa gcctgaactc acc 33

<210> 6

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 6

ggatcccagg ctttacactt tatgettc 28

<210> 7

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 7

ggaatgcagc ttctcaagg gactcgc 27

<210> 8

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 8

gcactcgtcc gagggcaaag gaatagc

27

<210> 9

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 9

tgtgctggga attgaaccca ggac

24

<210> 10

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Primer

<400> 10

ctacttgtct gtgctttctt cc

22

